

Annexure-B

1) Guidelines for selection of material and welding consumables:

a) **Stainless steel sheets:** Selection of Stainless steel sheets for manufacture of Stainless steel IR-DRDO retention tank must be according to the drawings. The state of material, condition, finish etc. should be as per following guidelines:

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| Heat treatment condition | The material must be cold rolled skin Passed, solution annealed and de-scaled |
| Finish | 2B |
| Material grade and Designation | As per drawing provided with tender |
| Protection procedure | The SS sheets must be protected with LDPE film of 90±10 µms thickness |

- i) The steel sheets shall be cleanly rolled to the dimensions, weights and tolerances specified. These shall be free from cracks, surface flaws, laminations, rough, jagged and imperfect edges, unevenness and other harmful defects detrimental to the end use.
- ii) Supplier must ensure above information on the WTC obtained from SS sheet supplier prior to purchase of the material for IR-DRDO retention tank manufacturing. The inspection agency should also ensure above details on material WTC.

b) **Welding consumables:**

i) All the joints shall be TIG welded by a filler rod confirming to table given below:

| Parent metal A | Parent metal B | Filler metal (material no. as specified in DIN8556) |
|--|---|---|
| X04Cr17Ni12Mo2Ti to IS: 6911-92, Equivalent to AISI: 316Ti, AISI 316, and AISI 316L. | X04Cr17Ni12Mo2Ti to IS: 6911-92, Equivalent to AISI: 316Ti, AISI 304 and AISI 316L. | SG 1.4430 |
| X04Cr19Ni19 to IS: 6911-92 Equivalent to AISI 304 | X04Cr19Ni19 to IS: 6911-92 Equivalent to AISI 304 | SG 1.4316 |

- ii) Acceptance standards for welds shall be as per EN25817-1992 TIG welding intermediate(C).
- iii) Argon gas: Gr.1 of IS: 5760-1983.
- iv) Grinding wheels shall be free from iron, iron oxide, zinc or other undesirable materials that may cause contamination on the surface.

2) **Recommended practice for welding, cleaning and passivation processes:**

i) **Welding process:**

Welding process to be used is DC TIG welding in pulsing mode with digital TIG welding machine only.

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